

## **SOLIDS SEPARATION SYSTEM FOR WELL FLOWBACK**

### **ABSTRACT OF THE DISCLOSURE**

5           The invention contemplates a simple, easy to operate hydrocyclone separation system that removes the heavy phase containing the produced solids intermittently, rather than continuously. The desirable, lighter portion of the well production, from which the aggressive solids of the propanant have been removed, is continuously separated from the well production and treated by the existing surface fluid conditioning equipment at the well site. The heavy phase is collected in the bottom of the hydrocyclone. The outlet for the heavy phase flow stream is normally closed by a shutoff valve and is only dumped when the separator is full. The solid containing fluid exiting from the heavy phase outlet valve is passed through a standard oilfield hydraulic choke in order to reduce its pressure sufficiently so that normal piping and solids collection equipment can be used to handle the dumped fluid.

10

15